




EP408 (R3) Whicher Range Gas Field Rehabilitation Environment Plan Summary Report (WR-1 and WR-4)


A408-EHQ-RPT-00042

UNCONTROLLED WHEN PRINTED

REPORT (RPT) COVER SHEET

This RPT has been prepared by GHD on behalf of CalEnergy Resources (Australia) Ltd as the Operator of the Exploration Permit 408 (EP408).

DOCUMENT INFORMATION					
Document No.	A408-EHQ-RPT-00042	Rev	2	External Ref	
Asset	A408 – Whicher	Doc Library	EHSQ	Doc ID	A408-2001631918-375
Prepared by	Jordan Tindiglia	Signature		Date	24/11/2020
Supervised by	Drew Farrar	Signature		Date	24/11/2020
Approved by	Travis Enman	Signature		Date	24/11/2020

CUSTODIAN			
Name	Group	Signature	Date
Travis Enman	CalEnergy Resources (Australia) Limited		25/11/2020

REVISION HISTORY				
Revision	Description	Date	Prepared by	Approved by
2	Issued Final	24/11/2020	Jordan Tindiglia	Travis Enman
1	Issued Final	30/03/2019	Jordan Tindiglia	Travis Enman
0	As submitted to DMIRS for acceptance	23/12/2019	Jordan Tindiglia	Travis Enman

RELEASE STATEMENT (Check one box only)	
<input type="checkbox"/>	Unclassified (Shared without restriction)
<input checked="" type="checkbox"/>	Restricted (Freely shared within CER Group companies and JV partners)
<input type="checkbox"/>	Confidential (Shared with selected personnel)

REVIEW STATUS (Check one box only)	
<input type="checkbox"/>	Review period 1 year
<input type="checkbox"/>	Review period 3 years
<input type="checkbox"/>	Review not required

DOCUMENT DISTRIBUTION			
Copy No.	Name	Hard Copy	Electronic Copy
00	CE Document Control	<input type="checkbox"/>	<input checked="" type="checkbox"/>
01	DMIRS Environment Branch	<input type="checkbox"/>	<input checked="" type="checkbox"/>
02		<input type="checkbox"/>	<input type="checkbox"/>
03		<input type="checkbox"/>	<input type="checkbox"/>
04		<input type="checkbox"/>	<input type="checkbox"/>
05		<input type="checkbox"/>	<input type="checkbox"/>
06		<input type="checkbox"/>	<input type="checkbox"/>
07		<input type="checkbox"/>	<input type="checkbox"/>
08		<input type="checkbox"/>	<input type="checkbox"/>
09		<input type="checkbox"/>	<input type="checkbox"/>
10		<input type="checkbox"/>	<input type="checkbox"/>
11		<input type="checkbox"/>	<input type="checkbox"/>
12		<input type="checkbox"/>	<input type="checkbox"/>

TABLE OF CONTENTS

REPORT (RPT) COVER SHEET..... 2

1. INTRODUCTION 5

 1.1. Overview..... 5

 1.2. Contact Details 5

2. OVERVIEW OF THE ACTIVITY 6

 2.1. Location 6

 2.2. Planned Activities 6

 2.3. Chemicals and Other Substances 7

 2.4. Spill Equipment..... 7

 2.5. Waste Management..... 7

3. ENVIRONMENTAL RISKS, IMPACTS AND MANAGEMENT MEASURES 11

4. CONSULTATION 17

List of Tables

Table 2-1 Location of WR-1 and WR-4 wells.....6

Table 3-1 Summary of the existing environment, potential environmental impacts and management approach associated with rehabilitation activities12

List of Figures

Figure 2-1 Permits and Well Locations9

Figure 2-2 REP Area.....10

INTRODUCTION

1.1. Overview

CalEnergy Resources (Australia) Limited (CRA) proposes to rehabilitate the Whicher Range-1 (WR-1) and Whicher Range-4 (WR-4) well sites and the adjacent staging area within Exploration Permit 408 (R3) (EP-408) located in the south west of Western Australia.

CRA has developed the A408-EHQ-RPT-00042 – EP408 (R3) Whicher Range Gas Field Rehabilitation Environment Plan (WR-1 and WR-4) (REP) to systematically identify and assess the potential risks and environmental impacts associated with the rehabilitation activities and stipulates mitigation and management measures to avoid or reduce any adverse impacts or risks to the environment to an acceptable and As Low As Reasonably Practicable (ALARP) level. This Summary Document summarises the activities and mitigation / management measures in the approved REP.

1.2. Contact Details

CalEnergy Resources (Australia) Limited
Level 1, 8 St Georges Terrace
Perth WA 6000
Phone: (08) 6500 8500
Fax: (08) 6500 8599
Contact: Business Development Director

2. OVERVIEW OF THE ACTIVITY

2.1. Location

The rehabilitation activities will be undertaken within EP-408, in the Whicher Range, located approximately 20 km south of Busselton in south west Western Australia. activities will occur within the REP Area which includes the WR-1 and WR-4 well pad areas, the staging area and an access track between the WR-4 area and staging area to Tames Road. The locations of the suspended wells are provided in Table 2-1 and Figure 2-1, with the REP Area shown in Figure 2-2.

Well Name	Status	Zone	Latitude	Longitude
Whicher Range-1 (WR-1)	Plugged	50	-33° 50' 07.99"	115° 22' 28.02"
Whicher Range-4 (WR-4)	Plugged	50	-33° 50' 22.38"	115° 22' 06.49"

Table 2-1 - Location of WR-1 and WR-4 wells

2.2. Planned Activities

The rehabilitation activities will involve:

- Phase 1: Planning;
- Phase 2: Groundwater monitoring;
- Phase 3: Implementation (on-ground works);
- Phase 4: Monitoring and maintenance; and
- Phase 5: Infrastructure removal.

Phases 1, 2, 3, 4 and 5 are described as planned activities below.

2.2.1. Personnel, timing and mobilisation

The planned activities will be undertaken by CRA delegates and contractors as required. No onsite accommodation will be required for the activity due to the proximity to Busselton and the short and intermittent duration of the activity of the activity.

The Phase 1 planned activities will be undertaken during REP development (2019) and throughout 2020/21 as required. The Phase 2 planned activities will be scheduled to commence in the first half of 2021 and will extend for 12 months. A possible second 12 months shall be informed by the results of the first 12 months. Phase 3 will be scheduled to commence at the conclusion of Phase 2 timing dependent on appropriate planting seasons. Phase 4 planned activities will commence after Phase 3 and Phase 5 planned activities will be scheduled prior to site handover to the land manager DBCA.

All planned activities will be conducted during day light hours nominally from 06:00-18:00 hours. This EP will permit the planned activities to occur at any time [season] of the year.

Personnel will be mobilised from Perth, Busselton and Vasse, and all equipment transported to the REP Area via the existing road infrastructure. Following mobilisation of equipment to site, CRA may also engage a security contractor to monitor the DEP Area during non-daylight hours (18:00-06:00) for the duration of the planned activities.

2.2.2. Phase 1: Planning

Rehabilitation planning has been undertaken in consultation with the land manager, DBCA. This process has developed an agreed end land use, closure objectives and completion criteria to measure the success of the rehabilitation.

The agreed end land use is native vegetation to be suitable to incorporate into the DBCA's management of the area as native forest (in State Forest).

The overall objective is to rehabilitate the REP Area to a safe, stable, non-polluting landform and a self-sustaining forest ecosystem within the context of the surrounding land use activities, and to comply with statutory requirements pertaining to the closure.

2.2.3. Phase 2: Groundwater monitoring

Groundwater monitoring will be undertaken in response to DWER advice and will include installation of two groundwater bores within the REP Area.

2.2.4. Phase 3: Implementation (on-ground works)

The rehabilitation activities will be implemented on-ground with the purpose of achieving the end land use, objectives and proposed completion criteria.

On-ground implementation will include site and surface preparation (e.g. civil works, surface ripping, initial weed control, re-instating fauna habitat features and topsoil) and planting and seeding.

2.2.5. Phase 4: Monitoring and maintenance

Monitoring will be undertaken across the REP Area for a period of five years following rehabilitation. The monitoring will encompass three parts, gathering data through onsite inspections, evaluation by review of monitoring data against agreed completion and implementing correction actions, both on-site remedial actions and, where necessary redefinition of completion criteria.

2.2.6. Phase 5: Infrastructure removal

Phase 5 will constitute the removal of infrastructure within the REP Area.

2.3. Chemicals and Other Substances

Chemicals and other substances to be used during the planned activities will include diesel (as a fuel for plant and machinery), herbicides and fertilisers. These chemicals and other substances will be used above ground, and will be stored in mobile/temporary storage tanks on light vehicles or located in a dedicated storage area that has been designed to reduce potential impacts to the environment (i.e. bunded area designed to AS 1940). A chemical register of Safety Data Sheets (SDS) for all chemicals that are used during the planned activities will be maintained.

No chemicals will be used downhole during the planned activities.

2.4. Spill Equipment

A site specific OSCP (including spill response procedure) is in place as part of the existing site specific Whicher Range emergency response plan, and is pertinent to the proposed rehabilitation activities.

2.5. Waste Management

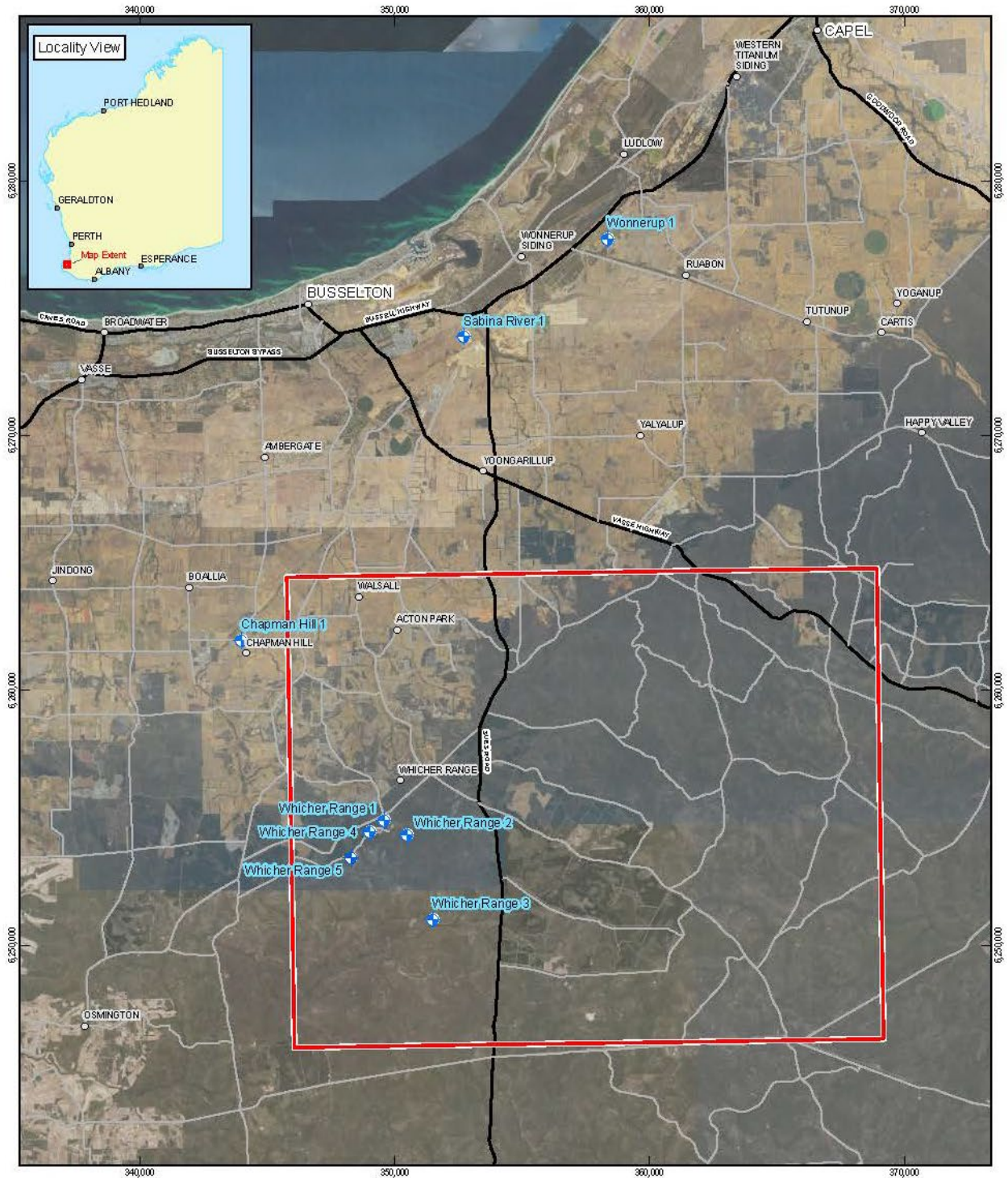
Expected waste generated during planned activities includes:

- General/operation waste (limestone gravel, potentially contaminated soil);

- Putrescible waste (food scraps and associated rubbish); and
- Chemical and hydrocarbon waste.

All waste products generated will be segregated into different waste streams and stored in appropriate waste receptacles with fitted lids, where appropriate. All waste will be removed from the REP Area and disposed of at appropriate facilities. Recycling of appropriate materials will occur where reasonably practicable to do so.

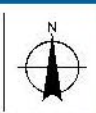
Any suspected illegal dumping is to be reported to the Department of Biodiversity, Conservation and Attractions (DBCA) Blackwood District office and its Southwest Mining Liaison Officer.



LEGEND

- Town/Locality
- Major Road
- Minor Road
- ◆ Petroleum Well
- ◆ Plug and Abandon
- ▭ Petroleum Title EP408

Paper Size A4
0 2 4 6
Kilometres
Map Projection: Transverse Mercator
Horizontal Datum: GDA1994
Grid: GDA1994 MGA Zone 50



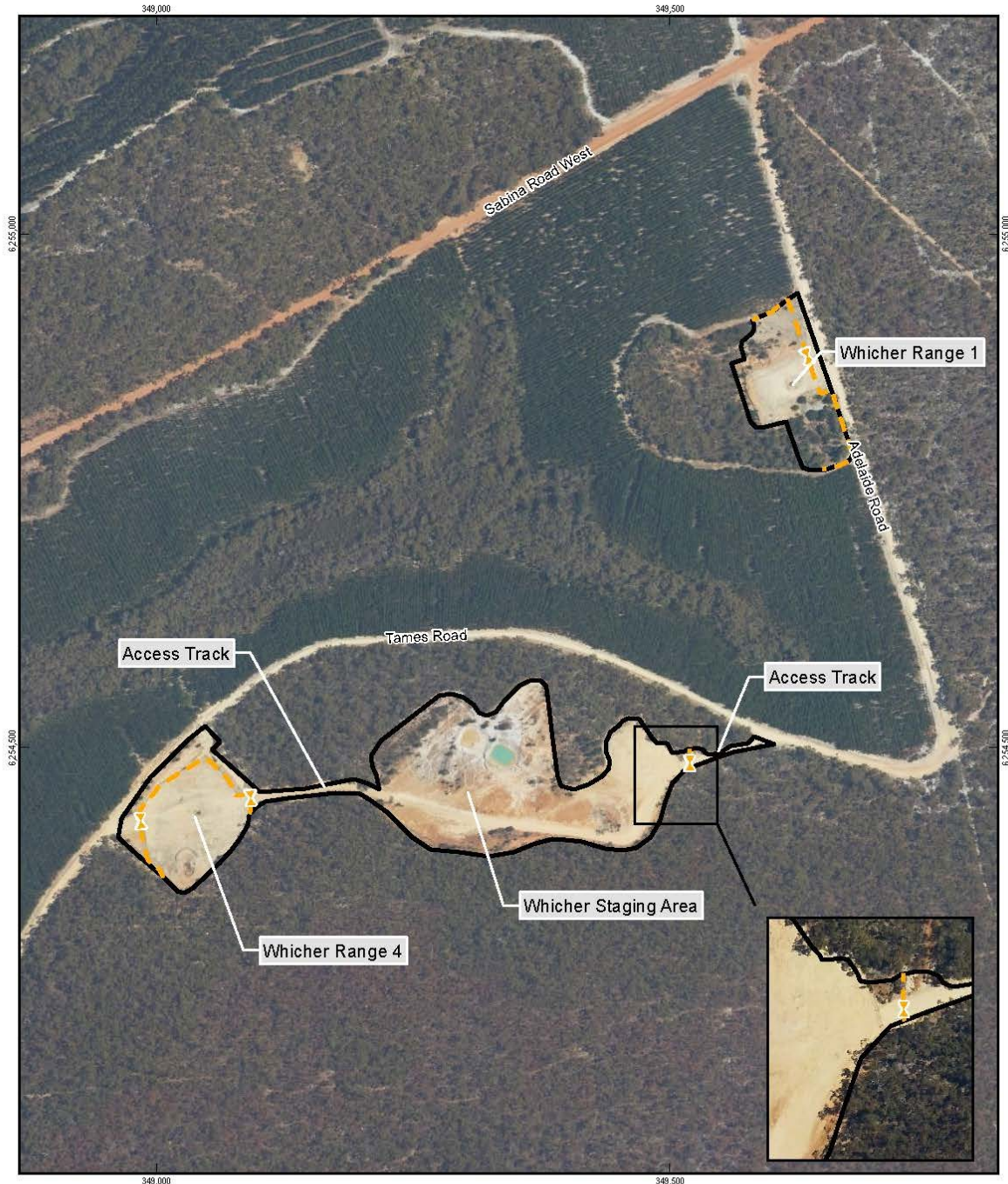
CalEnergy Resources Ltd
Whicher Range EPS

Job Number: 61-38508-04
Revision: 0
Date: 03 Nov 2020

Permit and Well Locations **Figure 2-1**

g:\ghdnet\internal\ghd\VAL\Perth\Projects\6138508\GIS\Maps\Working\6138802_003_Rev0_Fig3-1PermitAndWellLocations\MapSheet.mxd, Perth, WA, 6000 Australia T 61 8 6222 8222 F 61 8 6222 8555 E p.ernal@ghd.com W www.ghd.com
©2020. All rights reserved. GHD, CalEnergy, Landgate, Geoscience Australia and Department of Mines and Petroleum make no representation or warranty about the accuracy, reliability, completeness or suitability for any particular purpose and can accept no liability and responsibility for any kind of error in the contract, tort or otherwise for any expenses, losses, damages and/or costs (including legal fees or costs of litigation) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unreliable in any way and for any reason.
Data source: Landgate; Imagery (Aerial mosaic); Geoscience Australia; Geodata Topo 250K Series III; GHD; Well Location - 20100617; DMP; Petroleum Title EP408. Created by:kaadams

Figure 2-1 - Permits and Well Locations



LEGEND

-  Gate
-  Perimeter Fence
-  Approximate REP Area

Paper Size A4
0 50 100 150 200
Metres
Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 50



CalEnergy Resources Ltd
Whicher Range EPS

Job Number | 61-38508-04
Revision | 0
Date | 20 Dec 2019

REP Area

Figure 2-2

© 16 1138508\GIS\Maps\Working\6138502_003_Rev0_Fig2-2\EPArea.mxd 999 Hay Street, Perth, WA, 6000 Australia T 61 8 6222 8222 F 61 8 6222 8555 E permal@ghd.com W www.ghd.com
© 2019. Whilst every care has been taken to prepare this map, GHD, Landgate, Geoscience Australia and Department of Mines and Petroleum make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.
Data source: Landgate - Imagery - January 2018; GHD - Approximate CMEP Area - 20160817, Inspection Area - 20160830, Perimeter Fence, Gate - 20170202. Created by:bmorgan

Figure 2-2 - REP Area

3. ENVIRONMENTAL RISKS, IMPACTS AND MANAGEMENT MEASURES

An environmental risk assessment was undertaken by CRA to identify and assess the potential risks and environmental impacts associated with the rehabilitation activities. A summary of the existing environment within and surrounding the REP Area and potential environmental impacts that could result from the rehabilitation activities are outlined in Table 2-1. This Table also presents the mitigation and management measures that form part of the implementation strategy to minimise potential risks to the environment to an acceptable and As Low As Reasonably Practicable (ALARP) level.

Table 3-1 - Summary of the existing environment, potential environmental impacts and management approach associated with rehabilitation activities

Environmental Aspect	Description	Potential Impact	Key Management Measures	Residual Risk Analysis and Ranking	Implementation Strategy
Fire	<p>The REP Area is located within the Molloy Block of the Blackwood State Forest (F 32, Class A) managed by DBCA. The Vasse Pine Plantation/Timber Reserve is located north, northwest and west of the REP Area and is subject to active logging. Areas of the Blackwood State Forest not subject to pine plantations are areas of native Jarrah-Marri forest which has previously been logged and now is mainly regrowth. The Blackwood State Forest covers approximately 52,215 ha and, in the vicinity of the REP Area, borders the North East Margaret River State Forest, Rapids Conservation Park, Whicher National Park, Millbrook State Forest and a number of un-named reserves.</p> <p>The REP Area was previously cleared in 1968 and 1997 prior to exploration drilling by other unrelated companies. To date the REP Area has been retained as a cleared space with minimal regrowth observed.</p>	<p>Fire originating from REP Area and travelling off-site.</p> <p>Fire originating from REP Area and remaining on-site.</p>	<p><u>Hot Works</u> All hot works will be undertaken in accordance with Bushfire Procedure and in strict compliance with DBCA, DFES and Shire exemption/permit conditions.</p> <p><u>Vehicle movements</u> Compliance with Journey Management Plan, including minimum vehicle requirement specifications Vehicle access will be restricted to cleared areas and established tracks to minimise potential for fire resulting from vehicle exhausts coming into contact with dry vegetation.</p> <p><u>Combustible waste/fluid stored at REP Area</u> All waste generated from activities to be removed from REP Area and disposed at appropriate facilities at the end of each Phase Appropriate housekeeping</p> <p><u>Third party malicious damage at REP Area</u> Vehicle restrictive or other temporary barriers maintained between the well pads and adjacent publicly accessible roads.</p> <p><u>Equipment failure</u> Servicing and maintenance of equipment and machinery in line with manufacturer's specifications will occur (off-site) where possible</p> <p><u>Smoking</u> Smoking will be banned within REP Area</p>	<p>Low – Through the implementation of mitigation and management measures, it is unlikely the activities will result in a bushfire originating from the REP Area and resulting in an adverse impact on the environment.</p>	<p>Investigation and reporting of any non-conformances with DBCA, DFES or Shire conditions</p> <p>Compliance with Journey Management Plan</p> <p>Implement appropriate waste management practices.</p> <p>Premobilisation inspection and/or Operational Readiness Verification</p> <p>Daily inspection checklists during planned activity on-site operations</p> <p>Weekly inspection checklists during planned activity on-site operations</p> <p>Demobilisation inspection at conclusion of planned activity operations</p>
Hydrocarbon and Chemical Spills	<p>The REP Area is located within the Busselton-Capel Groundwater Area, which is proclaimed under the RIWI Act. The REP Area is also located within the Margaret River Catchment Public Drinking Water Source Area (PDWSA), which is listed as Priority 1 and proclaimed under the <i>Country Areas Water Supply Act 1947 (CAWS Act)</i>. The Margaret River Catchment PDWSA supplies Margaret River, Prevelly, Gnarabup and Cowaramup.</p> <p>A number of drainage lines occur in the vicinity of the REP Area, these include the Vasse River and associated tributaries located approximately 1.5 km to the north and west, Margaret River and associated tributaries located approximately 700 m to the south and the Sabina River and</p>	<p>Localised soil impacts resulting from spills <20 L</p>	<p><u>Storage and handling of fuels and chemicals</u> No long-term storage of fuels or chemicals on-site Storage and handling of fuels and chemicals in accordance with Safety Data Sheets (SDS) Maintain a chemical register of SDS for all chemicals that are used during the planned activities Fuels and chemicals will be stored within a bunded storage area. On-site refuelling comply with Refuelling Procedure, shall be continuously supervised and only to occur on bunded liner or with spill trays. Use of appropriate vessel for storage and transport (as per SDS) Inspection of vessels prior to mobilisation is to include inspection and verification that there are no leaks, and that containers are sealed and secure Spill kit appropriate to the nature and scale of the activity are available on-site during activities involving the storage or handling of fuels and chemicals</p>	<p>Low – Given the mitigation and management measures that will be implemented, localised soil impacts are unlikely.</p>	<p>Compliance with Journey Management Plan</p> <p>Premobilisation inspection and/or Operational Readiness Verification</p> <p>Daily inspection checklists during planned activity on-site operations</p>

**EP408 (R3) Whicher Range Gas
Field Rehabilitation Environment
Plan Summary Report (WR-1 and
WR-4)**

Environmental Aspect	Description	Potential Impact	Key Management Measures	Residual Risk Analysis and Ranking	Implementation Strategy
	associated tributaries located approximately 10 km to the east. The REP Area is a cleared space and has a dedicated storage area that is bunded.	Localised soil impacts resulting from spills 20-100 L Localised soil and/or surface water impacts resulting from spills >100 L	Spills (including spills within bunded areas) managed in accordance with the Spill Response Procedure. <u>Vehicle movements</u> Compliance with Journey Management Plan, including minimum vehicle requirement specifications Vehicle access will be restricted to existing cleared areas and established tracks to minimise potential for vehicle collision or rollover resulting in spills <u>Unsecure loads during transport of fuels and chemicals</u> Compliance with Journey Management Plan, including: Use of appropriate vessels for storage and transport (as per SDS) Inspect vessels prior to mobilisation Secure loads <u>Leaking plant and/or equipment</u> Servicing and maintenance of plant and machinery in line with manufacturer's specifications and to identify leaks Appropriate bunding	Low – Given the mitigation and management measures that will be implemented, localised soil impacts are unlikely. Low – Given the limited use of bulk liquid storage on-site and the mitigation and management measures that will be implemented, impacts on localised soil and surface water are unlikely.	
Soil Erosion and Transportation	The REP Area occurs within the Blackwood Plateau soil-landscape system, and specifically the Birdella and Kingia subsystems. These subsystems are characterised by sandy to loamy gravels and deep sands. The REP Area was previously cleared in 1968 and 1997 prior to exploration drilling by other unrelated companies. To date the REP Area has been retained as a cleared space with minimal regrowth observed. Civil works have been undertaken within the REP Area to contain stormwater run-off as far as practicable	Soil erosion resulting in transportation of soil off-site	<u>Stormwater runoff and excessive wind erosion</u> Use of erosion measures and other soil stabilisation techniques to minimise stormwater velocity and wind erosion Slopes to be 1:5 or less where achievable without disturbance to surrounding vegetation (outside of the REP Area) Landform design to tie into the surrounding environment	Low – Given the mitigation and management measures that will be implemented, impacts on landforms or soil are unlikely.	Inspections completed during planned activity operations (Phase 3)
Waste	The REP Area was previously cleared in 1968 and 1997 prior to exploration drilling by other unrelated companies. To date the REP Area has been retained as a cleared space with minimal regrowth observed.	Loss of containment of waste generated on-site resulting in release of waste materials into the environment.	<u>Storage, handling, transport and disposal of waste materials</u> No personnel accommodated on site Appropriate waste receptacles available on-site Waste streams will be segregated on-site and will be disposed of, in an approved manner by contractors. Appropriate housekeeping Induction of all personnel regarding appropriate waste management Use of authorised contractor for disposal of septic waste from site <u>Removal of infrastructure</u> All waste generated to be removed and disposed at an appropriately licenced facility at the end of planned activity on-site operations.	Low – Given the negligible consequence and implementation of mitigation and management measures, it is unlikely the activities will result in a loss of containment of waste causing an impact on the environment.	Removal of generated waste material off-site and disposal at appropriate facility. Implement appropriate waste management practices. Premobilisation inspection record and/or CRA Operational Readiness Verification Weekly inspection checklists during planned activity on-site operations

**EP408 (R3) Whicher Range Gas
Field Rehabilitation Environment
Plan Summary Report (WR-1 and
WR-4)**

Environmental Aspect	Description	Potential Impact	Key Management Measures	Residual Risk Analysis and Ranking	Implementation Strategy
			<u>Illegal dumping of waste by third party</u> Reporting any illegally dumped waste to DBCA (Blackwood District) Vehicle restrictive barriers will be maintained between the WR-1 and WR-4 sites and adjacent publicly accessible roads to restrict public access.		Demobilisation inspection at conclusion of planned activity operations
Fauna	<p>The REP Area is located within State Forest which provides habitat for a range of native fauna species.</p> <p>The REP Area was previously cleared in 1968 and 1997 prior to exploration drilling by other unrelated companies. To date the REP Area has been retained as a cleared space with minimal regrowth observed.</p> <p>No conservation significance fauna species have been observed within the REP Area. Furthermore, given the degree of clearing and lack of native flora and vegetation in the REP Area it is expected that only occasional visitation of native fauna species on the site.</p>	Detrimental impacts to native fauna	<u>Vehicle movements</u> Compliance with Journey Management Plan Enforce vehicle speed restrictions No driving off cleared areas and established tracks <u>Inappropriate waste management practices</u> All waste generated from rehabilitation activity operations to be removed and disposed at appropriate facilities Use of appropriate waste receptacles Appropriate housekeeping	Low – Through the implementation of mitigation and management measures, it is unlikely the activity will impact on native fauna.	Compliance with Journey Management Plan Implement appropriate waste management practices. Compliance with the Whicher Range Gas Field Wildlife Management Procedure Investigation and reporting of any incidences of fauna injury or death. Demobilisation inspection at conclusion of planned operations
Flora and Vegetation	<p>The REP Area was previously cleared in 1968 and 1997 prior to exploration drilling by other unrelated companies. To date the REP Area has been retained as a cleared space.</p> <p>No conservation significance flora taxa have been recorded within the REP Area.</p> <p>The REP Area is considered to occur in an area at risk of dieback. Advice was sought from DBCA on the extent of dieback in the REP Area and surrounds; it is considered the majority of the surrounding areas are severely affected by dieback.</p>	Clearing of vegetation outside of previously cleared areas.	<u>Vehicle movements</u> Compliance with Journey Management Plan No driving off cleared areas and established tracks <u>Personnel ingress into non-cleared areas</u> All proposed vegetation management may only proceed with specific written direction from the CRA Business Manager or CER Asset Manager Personnel will be inducted on environmental responsibilities and risks prior to mobilisation to site for planned activities. <u>Unapproved/un-intentional native vegetation clearing</u> Planned activities restricted to REP Area. Partial perimeter fencing designating boundary between the REP Area (cleared) and adjacent State Forest (native vegetation)	Low– Given there is no clearing outside of existing REP Area required and through the implementation of management measures, it is unlikely the activity will impact on flora and vegetation.	Compliance with Journey Management Plan Completion of vehicle inspection checklist Investigation and reporting of any unauthorised vegetation damage/clearing.
		Introduction or spread of introduced species (weeds).	<u>Vehicle movements</u> Compliance with Journey Management Plan No driving off cleared areas or established tracks All vehicles and machinery to be clean of soil and plant material prior to mobilising to site for planned activities <u>Personnel ingress into non-cleared areas</u> Third party vehicle access restricted by fencing Signage to indicate rehabilitation in process Personnel will be inducted on environmental responsibilities and risks prior to mobilisation to site for planned activities <u>Basic raw materials /topsoil material containing weeds/seeds brought to site</u> BRM and topsoil material will be sourced on-site where possible. Alternate sources of basic raw materials will investigated and selected in consultation with DBCA with priority given to local provenance and hygiene.	Low – Through the implementation of management measures, it is unlikely the activity will impact on flora and vegetation.	

**EP408 (R3) Whicher Range Gas
Field Rehabilitation Environment
Plan Summary Report (WR-1 and
WR-4)**

Environmental Aspect	Description	Potential Impact	Key Management Measures	Residual Risk Analysis and Ranking	Implementation Strategy
		Further spread of dieback into uninfected areas	<u>Vehicle movements</u> Compliance with Journey Management Plan No driving off cleared areas or established tracks All vehicles and machinery to be clean of soil and plant material prior to mobilising to site for planned activities <u>Personnel ingress into non-cleared areas</u> Third party vehicle access restricted by fencing. Signage to indicate rehabilitation in process. Personnel will be inducted on environmental responsibilities and risks prior to mobilisation to site for planned activities. <u>BRM/topsoil material containing dieback brought to site</u> BRM and topsoil material will be sourced on-site where possible. Alternate sources of basic raw materials will be investigated and selected in consultation with DBCA with priority given to local provenance and hygiene.	Medium – Through the implementation of management measures, it is unlikely the activity will impact on flora and vegetation.	
Air	Air emissions in the REP Area and surrounds are principally attributable to forestry management activities (mainly logging) and traffic on existing roads. At a regional level on an event basis air quality may be adversely impacted by prescribed controlled burns and uncontrolled bushfires.	Reduced amenity and human health impacts (dust)	<u>Vehicle movements / physical presence of bare ground / site preparation activities</u> Compliance with Journey Management Plan Enforce vehicle speed restrictions Local neighbours will be engaged and advised of planned activities and potential air emissions. <u>Unauthorised clearing of vegetation</u> No native vegetation clearing Personnel will be inducted on environmental responsibilities and risks prior to mobilisation to site for planned activities.	Low – Given the limited air emissions sources associated with the activity, distance to sensitive receptors and through the implementation of management measures, it is unlikely the activity will impact on amenity, air quality or human health.	Compliance with Journey Management Plan Investigation and reporting of any unauthorised vegetation damage/clearing. Investigation and reporting of any stakeholder complaints relating to air emissions. Premobilisation inspection and/or Operational Readiness Verification Daily inspection checklists during planned activity on-site operations
		Minor deterioration of local air quality due to emissions of pollutants and greenhouse gases	<u>Poorly maintained equipment and machinery / emissions from equipment and machinery</u> Servicing and maintenance of equipment and machinery in line with manufacturer's specifications Local neighbours will be engaged and advised of planned activities and potential air emissions		
Noise	Noise levels in the REP Area and surrounds are principally attributable to forestry management activities (mainly logging) and traffic on existing roads.	Reduced amenity	<u>Vehicle movements</u> Compliance with Journey Management Plan Enforce vehicle speed restrictions <u>Poorly maintained equipment and machinery / emissions from equipment and machinery</u> Servicing and maintenance of equipment and machinery in line with manufacturer's specifications Noise abatement controls on machinery if required Stakeholder consultation (notification prior to carrying out planned activities) Planned activities conducted during daylight hours	Low – Given the limited noise emissions sources associated with the activity, distance to sensitive receptors and through the implementation of management measures, it is unlikely the activity will impact on amenity.	Compliance with Journey Management Plan Premobilisation inspection and/or Operational Readiness Verification Investigation and reporting of any stakeholder complaints relating to noise
Light	Light emissions in the REP Area and surrounds are principally attributable to forestry management activities (mainly logging) and traffic on existing roads.	Reduced amenity	<u>Use of light towers if security is required at night</u> Planned activities conducted during daylight hours Positioning of light towers to minimise off-site disturbance Stakeholder consultation (notification prior to rehabilitation activities)	Low – Given the temporary use of light towers for security, distance to sensitive receptors and through the implementation of management measures, it is	Compliance with Journey Management Plan Investigation and reporting of any stakeholder complaints relating to light emissions

Environmental Aspect	Description	Potential Impact	Key Management Measures	Residual Risk Analysis and Ranking	Implementation Strategy
				unlikely the activity will impact on amenity.	

4. CONSULTATION

CRA has maintained ongoing stakeholder and community consultation as part of the Whicher Range operations. Stakeholder and community consultation conducted by CRA in relation to rehabilitation activities included correspondence with and/or face to face meetings with DMIRS, DBCA and DWER. CRA intends to maintain relations with stakeholders and the community throughout the activity.

Consultation specific to the development of the REP has been undertaken from April 2018 to present. The main themes or issues raised as part of the consultation have included:

- The end land use of the REP Area;
- Development of the closure aspects, objectives, completion criteria and measurement tools/supporting evidence;
- Rehabilitation monitoring and proposed on-site remediation actions;
- Potential contamination aspects; and
- Groundwater monitoring.

CRA has actively engaged with DBCA (the land manager) and DWER to determine expectations of end land use and to develop closure aspects, objectives, completion criteria and measurement tools/supporting evidence that are acceptable to the DBCA and DWER. Alignment on these aspects has been achieved through face to face workshop and meetings, a review of the REP by DBCA and DWER, and adoption of recommendations provided. Arrangements for ongoing engagement during the activity have also been made.

CRA has engaged with DWER regarding rehabilitation objectives and ground water monitoring as it pertains to informing the REP.